



PUBLIC WORKS DEPARTMENT

CITY OF PORTSMOUTH
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January 29, 2016

Mark Pollins
Director of Water Enforcement
U.S. Environmental Protection Agency
Room # 3142
USEPA Ariel Rios Building (AR)
1200 Pennsylvania Avenue N.W.
Washington, D.C. 20004

Re: Consent Decree 09-cv-283-PB
Quarterly Report No. 25
Portsmouth, New Hampshire

Dear Mr. Pollins:

In accordance with Consent Decree 09-cv-283-PB, Section V, item paragraph 20, dated August 12, 2009, and as amended by Consent Decree Modification filed July 2, 2012 and approved by the Court on February 15, 2013, the City of Portsmouth is submitting this quarterly status report.

The modified Consent Decree requires the filing of quarterly reports as follows:

Within 30 days after the end of each calendar quarter (i.e., by April 30, July 30, October 30, and January 30) after the Effective Date of this Consent Decree, until termination of this Decree pursuant to Section XVI, the City shall submit a written report for the preceding calendar quarter that shall include a description of the following: i) the status of any construction or compliance measures, including whether any such construction or compliance measure could be completed prior to relevant milestones contained herein consistent with sound engineering practice and normal construction practices; ii) the status of all Consent Decree milestones, including whether any have been achieved prior to the date for doing so; iii) any problems encountered or anticipated, together with the proposed or implemented solutions; iv) the status of permit applications; v) operation and maintenance operations; and vi) reports to State agencies.

The following is the list of compliance requirements listed in Section IV of the Consent Decree including additional requirements listed in the Consent Decree Modification. For clarity the requirements are listed in plain text and the status of the item is shown in ***Bold Italics***.

Preface

The City of Portsmouth seeks to modify certain construction and compliance deadlines in its Consent Decree. To that end, the City of Portsmouth submitted to the EPA and other parties a Statement of Position on December 10, 2015, outlining the grounds for its request. This statement was submitted as part of the formal dispute resolution process. Since that submission, the City and all parties have been engaged in negotiations relative to the City's request. The EPA's deadline to respond to the City's Statement of Position was originally set for January 25, 2016. That response deadline has been suspended by agreement of the parties in light of the ongoing negotiations.

The 100% design documents have been submitted to EPA and NHDES. The City's current schedule is to bid the project in March 2016 and to issue a Notice to Proceed no later than July 1, 2016. The City anticipates a 47 month construction schedule for project substantial completion and compliance with permit being achieved by April 1, 2020.

Specific Consent Decree Items

8. Nine Minimum Controls Compliance Plan. Attached (*in the referenced CD*) as Appendix A is the Nine Minimum Controls Compliance Plan. The City shall implement the Nine Minimum Controls Compliance Plan in accordance with the schedule specified in Appendix A.

- i) *There are no construction related activities with this item. The compliance measures associated with this item are on-going. The EPA performed an enforcement inspection of the City's wastewater collection and pumping system on July 27, 2015. The inspection team found the City's systems and records were in acceptable condition. Comments included the following: adding CSO signs; providing backup on the work order records that support the amount of sewer collection system TV inspection and cleaning performed annually; and an update on the City's ongoing infiltration and inflow and Post Construction Monitoring Program studies. The City provided the requested information by follow-up letter on September 25, 2015.*
- ii) *There is no Consent Decree milestone associated with this item.*
- iii) *There have been no problems encountered or anticipated with this item. The items requested in follow-up to the collection system inspection have been addressed by separate letter to the EPA as noted in Item i) above.*
- iv) *There are no permit applications associated with this item.*
- v) *Operation and maintenance is on-going. The Infiltration and Inflow study and Post Construction Monitoring Program study are ongoing.*
- vi) *There are no reports to State Agencies associated with this item.*

9. Wastewater Master Plan. Attached as Appendix B is the WMP SOW dated May 17, 2007. The City shall implement the WMP in Appendix B, and comply with all milestones and schedules in Appendix B.1.

The Schedule listed in Appendix B.1 has been modified by the Consent Decree Modification to include additional tasks and a revised schedule. The Consent Decree Modification includes a schedule for completion of secondary treatment upgrades at the Peirce Island Treatment Plant, as well as, adjustments to the Long Term Control Plan project schedule. Final completion for the

wastewater treatment plant upgrades, including compliance with permit requirements, is required by May 2017. The City has requested an extension of this deadline and that request is being discussed in negotiations as described in the preface to this report.

The additional requirements of the amended Consent Decree are listed below as items g through n:

g. By June 30, 2012, the City shall complete pilot testing of potential treatment technologies for achieving secondary treatment, including, but not necessarily limited to: Biologically Aerated Filters (BAF), BioMag, Moving Bed Biofilm Reactors (MBBR) w/ Dissolved Air Flotation (DAF), and Conventional Activated Sludge with BioMag. By July 30, 2012, the City shall complete a data summary relative to the pilot testing.

This milestone has been met. No further action is required of the City.

h. By October 1, 2012, the City shall submit a Piloting Technical Memorandum that includes data from piloting and a recommendation on the design and capacity of secondary treatment facilities.

This milestone has been met. No further action is required of the City.

i. By July 1, 2013, the City shall commence final design of secondary treatment facilities.

This milestone has been met. No further action is required of the City.

j. By August 31, 2014, the City shall complete design of secondary treatment facilities.

i) *Design of the wastewater treatment facilities is complete and the 100% design drawings and specifications were transmitted to EPA on December 28, 2015. The date of design completion is different than the stipulated deadline and is a part of the ongoing negotiations outlined in the preface to this report. The design documents included a 6.1 MGD Biological Aerated Filter (BAF) capable of meeting a total nitrogen effluent limit of 8 mg/L on a seasonal rolling average basis.*

The City asked AECOM to expedite the design of the existing primary clarifier and gravity thickener mechanism replacement. The design and construction of this work is complete. See Item k. for additional details.

There are no construction activities with this item.

ii) *The City's consultant designed a WWTF upgrade capable of nitrogen removal. As noted in previous quarterly reports and separate correspondence, designing for nutrient removal required substantial additional effort above that for the plant required under the Consent Decree which achieves only secondary treatment and so this Consent Decree milestone was not met. The City has requested an extension of this deadline and that request is being*

discussed in negotiations as described in the preface to this report.

- iii) This item is complete. See response to ii above.*
- iv) The Peirce Island WWTF NPDES permit reapplication was submitted in December 2011. A draft NPDES permit has not yet been received. Design related permitting is ongoing. An archaeological assessment related to a review of the National Register of Historic Places as required per Section 106 of the National Historic Preservation Act is complete. The City's applications for the natural resources, standard dredge and fill and shoreland protection permits are complete. The Alteration of Terrain permit application was submitted to the New Hampshire Department of Environmental Services. A Remedial Action Plan (RAP) for the existing Solids Processing Building was submitted to the PCB Coordinator at EPA and comments are being addressed. Additional permits may be required and will be defined as the final layout is developed and finalized. Construction permits will be required and will be the responsibility of the selected Contractor.*
- v) There are no operation and maintenance activities with this item.*
- vi) There is no specific report associated with this milestone to be submitted to State Agencies. A Design Phase 1 Summary Memorandum, 30% Final Design Memorandum, 60% Final Design plans and specifications, 75% Design plans and specifications, 90% Design plans and specifications and 100% Design plans and specifications were forwarded under separate cover.*

k. By March 1, 2015, the City shall commence construction of secondary treatment facilities.

- i) The City awarded the Primary Clarifier and Gravity Thickener Replacement project to Methuen Construction, Inc. in the amount of \$1,375,114. A notice to proceed was issued on September 12, 2014, and the project is complete.*

The City's consultant designed a WWTF upgrade capable of nitrogen removal. As noted in previous quarterly reports and separate correspondence, designing for nutrient removal required substantial additional effort above that for the plant required under the Consent Decree which achieves only secondary treatment and so this Consent Decree milestone was not met. The City has requested an extension of this deadline and that request is being discussed in negotiations as described in the preface to this report.

- ii) See response to ii above. The Primary Clarifier and Gravity Thickener Replacement project was completed in advance of the larger facility upgrade and additional efforts will be made to expedite the schedule if possible and consistent with sound engineering and construction practices.*
- iii) The Peirce Island WWTF NPDES permit reapplication was submitted in December 2011. A draft permit has not yet been received. Applications have been submitted for natural resource type permits. Construction related permits will be the responsibility of the selected Contractor.*
- iv) There are no operation and maintenance activities with this item.*
- v) There is no report associated with this milestone to be submitted to State Agencies.*

l. By March 1, 2017, the City shall complete construction of secondary treatment facilities.

- i) The Primary Clarifier and Gravity Thickener Replacement Project is complete. The City has*

requested an extension of this deadline and that request is being discussed in negotiations as described in the preface to this report. The construction schedule will be finalized as part of Consent Decree procedures referenced in requirement j above.

- ii) This milestone is unlikely to be met for the larger WWTF upgrade. The completion of construction will be impacted by resolution of the issues currently being discussed in negotiations as described in the preface to this report.*
- iii) See response to ii above. The Primary Clarifier and Gravity Thickener Replacement project was completed in advance of the larger facility upgrade and additional efforts will be made to expedite the schedule if possible and consistent with sound engineering and construction practices.*
- iv) The Peirce Island WWTF NPDES permit reapplication was submitted in December 2011. A draft permit has not yet been received. Applications have been submitted for natural resource type permits. Construction related permits will be the responsibility of the selected Contractor.*
- v) There are no operation and maintenance activities with this item.*
- vi) There is no report associated with this milestone to be submitted to State Agencies.*

m. By May 1, 2017, the City shall achieve compliance with secondary treatment limits in the Permit.

- i) There are no construction activities with this item yet. The construction schedule will be finalized as part of Consent Decree requirement j above.*
- ii) This milestone is unlikely to be met. The City has requested an extension of this deadline and that request is being discussed in negotiations as described in the preface to this report.*
- iii) The Peirce Island WWTF NPDES permit reapplication was submitted in December 2011. Applications have been submitted for natural resource type permits. Construction related permits will be the responsibility of the selected Contractor.*
- iv) There are no operation and maintenance activities with this item.*
- v) There is no report associated with this milestone to be submitted to State Agencies.*

n. Whenever feasible, the City shall commence work in advance of milestones and complete such work as expeditiously as practicable, consistent with sound engineering practice and normal construction practices.

The City understands this measure and when consistent with sound engineering practice and normal construction practices will strive to meet its intent.

10. Combined Sewer Overflow Facility Upgrades. The City shall implement its April 2005 Final CSO Long Term Control Plan in accordance with the following schedule and shall complete all construction for implementation of the 2005 LTCP by October 2012:

A revised schedule was included with the Consent Decree Modification which was filed on July 2, 2012.

Original LTCP Schedule *

Planning Area I.D.	Contract I.D.	Project Completion Date
Lincoln 3	Phase I	10/1/2011
Lincoln 3	Phase II	10/1/2012
Lincoln 3	Phase III	10/1/2013
Court/State	Court #3	1/1/2012
Islington	Islington #1	10/1/2010
Islington	Islington #2	1/1/2012

Revised LTCP Schedule **

Planning Area I.D.	Contract I.D.	Project Status	Project Completion Date
Lincoln 3	Phase I	Complete	6/1/2012
Lincoln 3	Phase II	Complete	10/29/14 10/1/2014
Lincoln 3	Phase III	Complete	10/1/2013
Islington	Islington #2	Complete	7/30/13 6/1/2013

* Original Schedule

** As filed July 2, 2012 Consent Decree Modification.

- i) *The construction related activities with this item are shown in the table above. The compliance measures associated with this item are complete. The City expanded the scope of work on the Lincoln 3 Phase II project to include a portion of Willard Street and Marston Street. This work was completed during the summer and fall of 2015. This work provides an outlet for an area of combined sewer on South Street in advance of South Street reconstruction. This work was not part of the scope of the original Consent Decree, but resulted in additional sewer separation work. Additional sewer separation work is proposed as part of Capital Improvement Projects under design as follows: McDonough Street Phase 3B, Maplewood Avenue Complete Street, and the Islington Street Roadway Reconstruction.*
- ii) *Consent Decree milestones associated with this item have been met.*
- iii) *Work associated with this item is complete and no problems are anticipated.*
- iv) *Work associated with this item is complete and there is no permit application pending associated with this item.*
- v) *There are no operation and maintenance activities with this item.*
- vi) *There are no reports to State Agencies associated with this item.*

11. Interim Emissions/Effluent Limits. Until the City completes construction of, and achieves full operation of secondary treatment facilities in accordance with the schedule contained in this Consent Decree, the City shall comply with the interim limits and measures set forth in Appendix C. (See Current AO effluent limits). Thereafter, the City shall comply with the applicable NPDES permit limits then in effect.

- i) *The Peirce Island WWTF has met the interim permit limits for the Quarter covered by this report. The compliance measures associated with this item are on-going. There are no construction related activities with this item.*
- ii) *There are no Consent Decree milestones associated with this item.*

- iii) *The wastewater BOD₅ strength coming to Peirce Island appears to increase in the soluble form during periods of low flow. This occurred in the late summer and fall of 2012 and 2013. The soluble component passes through the physical CEPT process and makes it difficult to meet permit limits. The City anticipates that this issue will be resolved by construction of the new facility.*
- iv) *There is no permit application pending associated with this item.*
- v) *There have been no exceptional operations and maintenance activities outside of routine wastewater treatment facility operations associated with this item.*
- vi) *There are no reports to State Agencies associated with this item that have not also been submitted to the EPA as part of the milestone deadlines.*

12. Post Construction Monitoring Plan.

This item was submitted as part of the June 4, 2010, Wastewater Master Plan Draft submission. Following the WMP submission, the Consent Decree deadlines for the sewer separation projects were modified (see Item 10). The implementation schedule for the post construction monitoring plan (PCMP) therefore had to be adjusted. The adjusted PCMP implementation schedule is shown below.

- i) *The City received statements of qualifications and interviewed consultants in response to RFQ 37-14 I/I and PCMP. Based on the consultants' experience, the City chose to separate the projects. The PCMP project includes implementation of the post construction monitoring plan as required in the City's Consent Decree and will update the implementation schedule as identified in the introductory paragraph to this item. The project was awarded to Hazen & Sawyer and a contract was executed September 15, 2014. Wastewater flow meters were deployed and were removed in July 2015 for in-field measurements. The consultant is currently using the wastewater flow information to recalibrate the hydraulic/hydrologic model for the collection system. Hazen & Sawyer will submit on the City's behalf a revised PCMP under separate cover. See updated implementation schedule in item ii) below.*

The infiltration and inflow (I/I) project includes a sewer system evaluation survey of all portions of the collection system except the reconstructed Lincoln basin and a sump pump removal program for the City. This work will identify sources of extraneous flow in the collection system and make recommendations for sewer system rehabilitation to reduce extraneous flow. A contract was executed on February 9, 2015, with Woodard & Curran for this work. Wastewater flow meters were deployed and were removed in June 2015 for in-field measurements. The City's consultant is completed a report for the first phase of this work and is working with City staff to prioritize the next phase of work.

- ii) *In Volume 2 of the 2010 Draft Wastewater Master Plan (WMP), there was a PCMP implementation schedule. The City is providing an updated implementation schedule to be consistent with Hazen & Sawyer's anticipated schedule and with Item 10 as follows:*

Revised PCMP Schedule

PCMP Elements and Schedule			
Element	WMP Date	Rev Date	Status
Implementation of the sewer separation projects identified in the 2010 LTCP Update	Through 2012	10/29/14*	Complete
Re-establish monitoring program based on 2008 meter and rain gauge sites	2013	Spring 2015	Complete
Update and re-calibration of the collection system model using the 2008 monitoring data	2014	2016	Ongoing
Assessment of progress made towards meeting the goals of the 2010 LTCP Update	2015	2017	
Report to EPA and the New Hampshire DES	2015	2017	

* Lincoln 3 Phase II Sewer Separation Completion Date

- The Consent Decree milestones as revised above associated with this item will be met.*
- iii) *The Consent Decree milestones as revised above associated with this item will be met.*
 - iv) *There is no permit application pending associated with this item.*
 - v) *There are no operation and maintenance activities associated with this item.*
 - vi) *There are no reports to State Agencies associated with this item that have not also been submitted to the EPA as part of the milestone deadlines.*

As required by the Consent Decree:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact me at (603) 766-1416 if you have any questions or require additional information.

Very truly yours,



Peter H. Rice, P.E.
Director of Public Works

cc: Chief, Environmental Enforcement Section
Joy Hilton, USEPA Region 1
Tracy L. Wood, P.E., NHDES Wastewater Engineering Bureau
Allen Brooks, Esq., Department of Justice, Environmental Protection Bureau
John P. Bohenko, City Manager, City of Portsmouth
Suzanne Woodland, Deputy City Attorney
David S. Allen, P.E., Deputy City Manager
Brian Goetz, Deputy Director of Public Works